AMENDMENTS TO THE CLAIMS

Claims 1-49 are currently pending. Please amend Claims 1, 4, 16, 37, and 46 as follows.

1. (Currently amended) A method of removing at least a portion of a first liquid from a liquid-containing layer on a semiconductor substrate, comprising:

forming a first layer containing said first liquid on the semiconductor substrate;

forming a second layer on the first layer, said second layer comprising a second liquid; and

contacting said first layer with ~~a~~ said second liquid which attracts said first liquid in said first layer, thereby transferring at least a portion of the first liquid ~~from~~ out of said first layer into said second liquid, wherein said second liquid remains in said second layer; and

separating said second liquid from said first layer, thereby removing at least a portion of said first liquid from said first layer; and

inducing a phase transition in said first layer during or after said contacting.

2. (Original) The method of Claim 1, further comprising:

annealing said substrate and said first layer.

3. (Original) The method of Claim 2, wherein the first layer undergoes the phase transition during said annealing.

4. (Currently amended) A method of isolating plural trenches on a substrate, comprising:

placing said substrate in a chamber;

introducing silicon-containing vapor and hydrogen peroxide vapor into said chamber;

reacting said silicon-containing vapor with said hydrogen peroxide vapor to form a liquid layer comprising silicon-containing oligomers and water on the substrate, said liquid layer filling at least a portion of said trenches;

contacting said liquid layer with a hygroscopic liquid to remove at least a portion of said water in said liquid layer by transferring said at least a portion of said water out of said liquid layer and into said hygroscopic liquid;

separating said hygroscopic liquid from said liquid layer; and

heating said liquid layer to a temperature sufficient to form a solid comprising silica in at least a portion of said trenches.

5. (Original) The method of Claim 4, wherein said silicon-containing vapor comprises silane.

6. (Original) The method of Claim 4, wherein said hygroscopic liquid is selected from the group consisting of sulfuric acid, phosphoric acid, and a hygroscopic organic solvent.

7. (Original) The method of Claim 4, wherein said hygroscopic liquid comprises sulfuric acid.

8. (Original) The method of Claim 7, wherein said hygroscopic liquid comprising sulfuric acid is contacted with said liquid layer at a temperature between 0 and 300° Centigrade.

9. (Original) The method of Claim 7, wherein said hygroscopic liquid comprising sulfuric acid is contacted said liquid layer at a temperature between 100 and 200° Centigrade.

10. (Original) The method of Claim 7, wherein said hygroscopic liquid comprising sulfuric acid is contacted said liquid layer at a temperature of approximately 150° Centigrade.

11. (Original) The method of Claim 7, wherein said hygroscopic liquid comprising sulfuric acid is at a concentration of between 50 and 98 weight percent sulfuric acid.

12. (Original) The method of Claim 7, wherein said hygroscopic liquid comprising sulfuric acid is at a concentration of approximately 98 weight percent sulfuric acid.

13. (Original) The method of Claim 4, wherein said liquid layer is heated to a temperature between 100 and 1100° Centigrade.

14. (Original) The method of Claim 4, wherein said liquid layer is heated to a temperature between 300 and 800° Centigrade.

15. (Original) The method of Claim 4, wherein said liquid layer is heated to a temperature of approximately 400° Centigrade.

16. (Currently amended) A method of treating a semi-conductor substrate comprising:

placing the substrate in a chamber;

introducing silicon-containing vapor and hydrogen peroxide vapor into the chamber;

reacting said silicon-containing vapor with said hydrogen peroxide vapor to form a liquid layer comprising silicon-containing oligomers and water on the substrate; and

treating said liquid layer with a hygroscopic liquid, thereby removing at least a portion of said water in said liquid layer by transferring said at least a portion of said water out of said liquid layer and into said hygroscopic liquid.

17. (Original) The method of Claim 16, further comprising separating said hygroscopic liquid from said liquid layer.

18. (Original) The method of Claim 17, further comprising heating said liquid layer after separating said hygroscopic liquid from said liquid layer.

19. (Original) The method of Claim 18, wherein said heating forms a solid comprising silica from said liquid layer.

20. (Original) The method of Claim 16, wherein said hygroscopic liquid is selected from the group consisting of sulfuric acid, phosphoric acid, and a hygroscopic organic solvent.

21. (Original) The method of Claim 16, wherein said hygroscopic liquid comprises sulfuric acid.

22. (Original) The method of Claim 21, wherein said liquid layer is treated with said hygroscopic liquid comprising sulfuric acid at a temperature between 0 and 300° Centigrade.

23. (Original) The method of Claim 21, wherein said liquid layer is treated with said hygroscopic liquid comprising sulfuric acid at a temperature between 100 and 200° Centigrade.

24. (Original) The method of Claim 21, wherein said liquid layer is treated with said hygroscopic liquid comprising sulfuric acid at a temperature of approximately 150° Centigrade.

25. (Original) The method of Claim 21, wherein said hygroscopic liquid comprising sulfuric acid is at a concentration of between 50 and 98 weight percent sulfuric acid.

26. (Original) The method of Claim 21, wherein hygroscopic liquid comprising sulfuric acid is at a concentration of approximately 98 weight percent sulfuric acid.

27. (Original) The method of Claim 19, wherein said solid comprising silica forms an interlayer dielectric layer on said substrate.

28. (Original) The method of Claim 27, wherein said interlayer dielectric layer comprises a trench.

29. (Original) The method of Claim 28, further comprising filling said trench with a metal.

30. (Original) The method of Claim 19, wherein said substrate comprises a plurality of trenches.

31. (Original) The method of Claim 30, wherein said solid comprising silica isolates said substrate between said trenches.

32. (Original) The method of Claim 19, wherein said substrate comprises a plurality of metal lines on said substrate.

33. (Original) The method of Claim 32, wherein said solid comprising silica forms a dielectric layer over said plurality of metal lines.

34. (Original) The method of Claim 16, wherein said silicon-containing vapor comprises methyl silane.

35. (Original) The method of Claim 34, further comprising heating said liquid layer to a temperature sufficient to convert said liquid layer to a solid comprising silicon oxide.

36. (Original) The method of Claim 35, wherein said solid comprising silicon oxide forms a low-dielectric layer.

37. (Currently amended) A method of treating a semiconductor substrate in a chamber, said method comprising:

applying a first liquid comprising silicon onto said substrate and applying a hygroscopic second liquid onto said substrate after applying said first liquid;

contacting said first liquid comprising silicon and said second liquid with a third liquid which attracts said second liquid, thereby removing at least a portion of said second liquid; and

separating said third liquid from said first liquid comprising silicon on said substrate.

38. (Original) The method of Claim 37 wherein said hygroscopic second liquid is selected from the group consisting of sulfuric acid, phosphoric acid, and a hygroscopic organic solvent.

39. (Original) The method of Claim 37, wherein said hygroscopic second liquid comprises sulfuric acid.

40. (Original) The method of Claim 39, wherein said first liquid is contacted with said hygroscopic second liquid comprising sulfuric acid at a temperature between 0 and 300°C.

41. (Original) The method of Claim 39, wherein said first liquid is contacted with said hygroscopic second liquid comprising sulfuric acid at a temperature between 100 and 200°C.

42. (Original) The method of Claim 39, wherein said first liquid is contacted with said hygroscopic second liquid comprising sulfuric acid at a temperature of approximately 150°C.

43. (Original) The method of Claim 39, wherein said hygroscopic second liquid comprising sulfuric acid is at a concentration between 50 and 98 weight percent sulfuric acid.

44. (Original) The method of Claim 39, wherein said hygroscopic second liquid comprising sulfuric acid is at a concentration of approximately 98 weight percent sulfuric acid.

45. (Original) The method of Claim 37, wherein said first liquid comprising silicon comprises silicon dioxide.

46. (Currently amended) ~~The method of Claim 45,~~ A method of treating a semiconductor substrate in a chamber, said method comprising:

applying a first liquid comprising silicon and a hygroscopic second liquid onto said substrate;

contacting said first liquid comprising silicon and said second liquid with a third liquid which attracts said second liquid, thereby removing at least a portion of said second liquid, wherein said first liquid comprising silicon comprises silicon dioxide and said first liquid further comprises a dopant selected from the group consisting of arsenic, antimony, boron, phosphorous, and gallium; and

separating said third liquid from said first liquid comprising silicon on said substrate.

47. (Original) The method of Claim 37, wherein said applying comprises spin applying said first liquid comprising silicon and said hygroscopic second liquid onto said substrate.

48. (Original) The method of Claim 37, wherein said applying comprises chemical vapor depositing said first liquid comprising silicon and said hygroscopic second liquid onto said substrate.

49. (Original) The method of Claim 37, wherein said applying comprises:

introducing silicon-containing vapor and hydrogen peroxide vapor into said chamber; and

reacting said silicon-containing vapor with said hydrogen peroxide vapor to form said first liquid comprising silicon and said second liquid, wherein said second liquid comprise water.